

REMARKS

Entry of this Amendment and reconsideration are respectfully requested in view of the amendments made to the claims and for the remarks made herein.

Claims 1-20 are pending and stand rejected. Claims 1, 7, 8 and 15 have been amended.

The drawings are objected in that they should be designated by a legend such as -- Prior Art--.

Applicant thanks the examiner for his observation and has included herein replacement sheets 1 and 2 containing Figures 1, 2(a) and 2(b) which have been amended to contain the legend --Prior Art --. No new matter has been added.

Having provided properly annotated replacement sheets, applicant submits that the reason for the objection has been overcome. Applicant respectfully requests entry of the amended drawings and withdrawal of the objection.

Claim 1 is objected to for containing informalities.

Applicant thanks the examiner for his observation and has amended claim 1 to correct the informality noted.

Having amended the claim as suggested, applicant submits that the reason for the objection has been overcome. Applicant respectfully requests withdrawal of the objection and allowance of the claim.

Claims 2-3 and 7-22 stand rejected under 35 USC §112, first paragraph as failing to comply with the enablement requirement.

Applicant respectfully disagrees with, and explicitly traverses, the reason for rejecting the claims.

The instant application describes on page 7, lines 6-13, and with reference to Figure 3, the means for enabling the principles of the invention. More specifically, the instant application recites that "the transmission range of STA 1 can reach STA 2, but it can not reach STAs 3 and 4.... Hence, STAs 1 and 2 are hidden from STAs 3 and 4 and vice versa. The only way STAs 1 and 3 (also 4) can communicate with each other is through the AP 14. The underlying MAC protocol according to the present invention, as shown in FIG. 5, will enable pairs of STAs 1 and 2 and STAs 3 and 4 [i.e., the STAs non-hidden

from each other] to exchange data directly to each other simultaneously without the benefit of AP 14 by coordinating the medium access using a TDMA access mode."

Figure 5 further illustrates that specific timeslots in the TDMA access model are allocated to specific pairs of STAs.

Hence, contrary to the reason stated in the Office Action, the specification provides sufficient information using specific timeslots in the TDMA access model to enable the MAC layer to provide communication between pairs of STAs without the benefit of the AP.

Having shown there is sufficient information to enable the invention to one skilled in the art, applicant respectfully requests withdrawal of the rejection and allowance of the claims.

Claim 8 stands rejected under 35 USC §112, second paragraph as being indefinite. Applicant respectfully disagrees with and explicitly traverses the reason for rejecting the claim. However, in the interest of advancing the prosecution of this matter has amended claim 8 to more clearly state the invention. More specifically, claim 8 has been amended to recite that the signal message includes "data for each said station."

Having amended the claim 8 to more clearly state the content of the message signal, applicant submits that the reason for the rejection has been overcome. Applicant respectfully requests withdrawal of the rejection and allowance of the claims.

Claims 1 and 4-6 stand rejected under 35 USC §102(e) as being anticipated by Leung (US Pub. No. 6,262,980).

Applicant respectfully disagrees with, and explicitly traverses, the reason for rejecting the claims. However, in the interest of advancing the prosecution of this matter, the independent claims have been amended to recite "pairs of a transmitting station and a receiving station, wherein said pairs are hidden from each other based on the received interference power level."

Leung describes a method for dynamic resource allocation for broadband services by transmitting information in time subframes scheduled to avoid interference. More specifically, Leung describes a method, shown in Fig. 4, wherein the base station

transmits first in a designated sector and then transmits in all sectors. The receiving stations using the first and second transmission determine a Signal-to-Interference Ratio (SIR), which the base station then uses to determine the slot allocation for transmission. (see col. 9, lines 35-43).

However, contrary to the statements found in the Office Action, Leung fails to describe the step of "determining pairs of a transmitting station and a receiving station wherein said pairs are hidden from each other," as is described in the claims. Rather, Leung teaches the use of the SIR to determine concurrent slot transmission allocation and is silent with regard to determining pairs of transmitting and receiving stations hidden from each other.

A claim is anticipated only if each and every element recited therein is expressly or inherently described in a single prior art reference. Leung cannot be said to anticipate the present invention, because Leung fails to disclose each and every element recited.

Accordingly, applicant believes that the reason for the rejection of the claim has been overcome and can no longer be sustained. Applicant respectfully requests withdrawal of the rejection and allowance of the claim.

With regard the remaining claims, these claims ultimately depend from the independent claim 1 which has been shown to contain subject matter not disclosed by, and allowable over, the reference cited. Accordingly, these claims are also allowable by virtue of their dependency from an allowable base claim.

Applicant respectfully requests withdrawal of the rejection and allowance of these claims.

Claims 2-3, 7 and 9-22 stand rejected under 35 USC 103(a) as being unpatentable over Leung, in view of Adachi ("A Study on Channel Usage in a Cellular Ad-Hoc United Communication System for Operational Robots).

Applicant respectfully disagrees with, and explicitly traverses, the reason for rejecting the claims.

With regard to independent claim 7, Leung fails to describe the claim element "determining at least one pair of stations wherein said pairs are hidden from each other based on said reported interference information for concurrent transmission, which has

been shown with regard to claim 1. With regard to independent claim 15, Leung fails to describe the element "data signals between multiples pairs of said stations, determined to hidden from each other by said access point, can be exchanged concurrently without the benefit of said access point."

Adachi describes a system wherein a mobile station determines whether communication with a second mobile station is better performed directly or through the cellular network, i.e., the base station. (see step 6, second column, page 1501, which states "MT1 compares the strength of the reply signals. If there is only or a stronger reply from MT2, the pair starts ad-hoc communications with power control (P_{opt}). If there is only or a stronger replay from BS1, the cellular system is employed." Hence, Adachi teaches that the base station is informed whether ad-hoc or cellular communication is to be performed, which is determined by the mobile station. Adachi fails to teach that the base station determines pairs of non-hidden pairs of stations, as is recited in the claims.

A claimed invention is prima facie obvious when three basic criteria are met. First, there must be some suggestion or motivation, either in the reference themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the teachings therein. Second, there must be a reasonable expectation of success. And, third, the prior art reference or combined references must teach or suggest all the claim limitations.

Neither Leung nor Adachi, individually or in combination, teach or suggest all the elements recited in the above referred-to claims. Even if the teachings of Leung and Adachi, were combined, one would not be motivate to develop a system having all the features recited in the independent claims, i.e., a system wherein the base station determines those stations communicating without the benefit of the base station (i.e., access point).

Having shown that the combination of Leung and Adachi fails to teach or suggest all the elements claimed, applicant submits that the reason for the rejection has been overcome and the rejection can no longer be sustained. Applicant respectfully requests withdrawal of the rejection and allowance of the claim.


The other claims in this application are each dependent from the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of the patentability of each on its own merits is respectfully requested.

For all the foregoing reasons, it is respectfully submitted that all the present claims are patentable in view of the cited references. A Notice of Allowance is respectfully requested.

Respectfully submitted,

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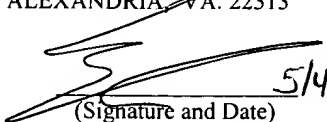

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